



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 15 July 2004 (15.07.2004)

PCT

(10) International Publication Number WO 2004/058044 A2

(51) International Patent Classification7:

A61B

(21) International Application Number:

PCT/US2003/036946

(22) International Filing Date:

19 November 2003 (19.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

US

(30) Priority Data:

10/299,486 19 November 2002 (19.11.2002) 19 May 2003 (19.05.2003) 10/441,089

(71) Applicant (for all designated States except US): DRG IN-TERNATIONAL, INC. [US/US]; 1167 Route 22 East, P.O. Box 1188, Mountainside, NJ 07092 (US).

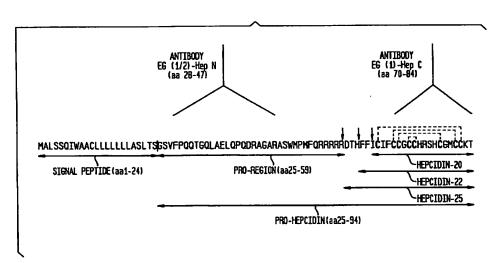
(72) Inventors; and

(75) Inventors/Applicants (for US only): GEACINTOV, Cyril, E. [US/US]; 1061 Belair Court, Mountainside, NJ 07092 (US) JANETZKO, Alfred [DE/DE]; Scheunenweg 20. 35510 Butzbach/Nieder-Weisel (DE). STREMMEL, Wolfgang [DE/DE]; Ludolf-Krehl-Str.34, 69120 Heidelberg (DE) KULAKSIZ, Hasan [DE/DE]; Steubenstr. 8, 69121 Heidelberg (DE).

- (74) Agents: NORTON, Gerard, P. et al.; Lerner, David, Littenberg, Krumholz & Mentlik, LLP, 600 South Avenue West, Westfield, NJ 07090 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,

[Continued on next page]

(54) Title: DIAGNOSTIC METHOD FOR DISEASES BY SCREENING FOR HEPCIDIN IN HUMAN OR ANIMAL TISSUES, BLOOD OR BODY FLUIDS AND THERAPEUTIC USES THEREFOR



(57) Abstract: The present invention concerns methods and kits for diagnosing a disease condition characterized by non-physiological levels of hepcidin protein, including prohepcidin and fragments thereof, comprising obtaining a tissue or fluid sample from a subject; contacting the sample with an antibody or fragment thereof that specifically binds to a polypeptide corresponding to the mid-portion or C terminus of a hepcidin protein, and quantifying the hepcidin level using an assay based on binding of the antibody and the polypeptide; wherein the non-physiological level of hepcidin is indicative of the disease condition. The present invention also concerns diagnostic methods and kits for applications in genetic technological approaches, such as for overexpressing or downregulating hepcidin. The present invention further concerns therapeutic treatment of certain diseases by treatment of subjects with hepcidin and agonists or antagonists of hepcidin.





WO 2004/058044 A2



SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.